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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,886	03/27/2001	Masayuki Yamada	36409-01000	2430

7590

12/01/2003

Milbank, Tweed, Hadley & McCloy LLP  
1 Chase Manhattan Plaza  
New York, NY 10005-1413

EXAMINER
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HARPER, V PAUL

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 12/01/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/818,886

Applicant(s)

YAMADA ET AL.

Examiner

V. Paul Harper

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-9,11,12,15-19 and 21-26 is/are rejected.
- 7) ☒ Claim(s) 3,4,10,13,14 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Specification*

1. The amended title is acceptable.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5-9, 11, 12, 15-19, and 21-26 rejected under 35 U.S.C. 102(b) as being anticipated by Kamai et al. (US Patent 5,864,812), hereinafter referred to as Kamai.

Regarding claims 1, 11, 21 and 22 Kamai discloses a method for speech synthesis using synthesized speech segments.

Kamai teaches:

- an the extraction step of extracting a plurality of small speech segments from a speech waveform (col. 4, lines 5-10);
- a prosody control step of processing the plurality of small speech segments to control prosody of the speech waveform while limiting processing of prosody control for a selected small speech segment of the plurality of small speech segments (Fig. 1, item 1, col. 4, lines 5-23, col. 6, lines 65-67); and

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- a synthesizing step of obtaining synthesized speech by using the speech waveform for which prosody control is performed in the prosody control step (Fig. 1, item 8, col. 4, lines 15-20).

Regarding claims 2 and 12, Kamai teaches:

- an the adding step of adding limitation information for inhibiting execution of predetermined processing for the selected small speech segment (col. 6, lines 55-64, Fig. 7, and col. 7, lines 55-63), and
- in the prosody control step, execution of the predetermined processing for a small speech segment to which the limitation information is added is inhibited in executing the prosody contro (col. 6, lines 55-64, "each syllable has a data field").

Regarding claims 5 and 15, Kamai teaches: the predetermined processing includes a change in an interval of a small speech segment, and in the prosody control step, a change in an interval of a small speech segment to which the limitation information is added is inhibited when making a change in a fundamental frequency of synthesized speech as the prosody control (Fig. 10, col. 9, lines 8-21).

Regarding claim 6 and 16, Kamai teaches: a unit means in which a plurality of window functions arranged along a time axis and limitation information corresponding to at least one of the window functions are stored is used, in the extraction step, small speech segments are extracted from a speech waveform by using the plurality of window

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functions, and in the prosody control step, when limitation information is made to correspond to a window function, a small speech segment extracted by using the window function is selected and the limitation is imposed on the small speech segment on the basis of the limitation information (Fig. 1, col. 6, lines 30-67, in particular lines 39-41).

Regarding claims 7 and 17, Kamai teaches: the limitation information is added to a small speech segment corresponding to a specific position on a speech waveform (Fig. 3, col. 6, lines 54-64).

Regarding claims 8 and 18, Kamai teaches: the specific position includes a boundary between a voiced sound portion and an unvoiced sound portion (col. 7, lines 55-63).

Regarding claims 9 and 19, Kamai teaches: the specific position includes a phoneme boundary (col. 7, lines 36-40, Fig. 20, col. 14, lines 36-56, syllable ID).

Regarding claims 23 and 25, these claims are rejected for the same reasons given in the rejections of claims 1 and 2, above.

Regarding claims 24 and 26, these claims are rejected for the same reasons given in the rejections of claims 1 and 6, above.

***Citation of Pertinent Art***

3. The following prior art made of record but not relied upon is considered pertinent to the applicant's disclosure:

- Vogten et al. (US Patent 5,479,564) a synthesis method that includes the manipulation of pitch and/or duration of a signal.
- Moulines et al. ("Pitch Synchronous waveform processing techniques for text-to-speech synthesis using diphones", Speech Communication, 9(5/6):453-467, Dec 1990) teach algorithms for text-to-speech synthesis based on acoustical units concatenation.
- Laroche, J. ("Time and pitch scale modification of audio signals," in Applications of Digital Signal Processing to Audio and Acoustics, Kahrs et al. Eds, Kluwer, 1998) teaches techniques for time evolution and pitch control of audio signals.

***Claim Objections***

4. Claims 3, 4, 10, 13, 14, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks  
P.O. Box 1450

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Alexandria, VA 22313-1450

or faxed to:

(703) 872-9314

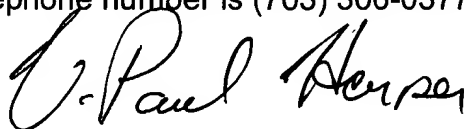
Hand-delivered responses should be brought to:

Crystal Park II  
2121 Crystal Drive  
Arlington, VA.  
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645. The fax phone number for the Technology Center 2600 is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.



VPH/vph  
November 25, 2003



**RICHEMOND DORVIL**  
**SUPERVISORY PATENT EXAMINER**